(c) the details of remedial steps taken during the last two years; and

(d) the result thereof?

THE MINISTER OF STATE IN THE MINISTRY OF POWER AND MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (DR. S. VENUGOPALACHARI) : (a) and (b). The share of hydroelectric potential in the total installed capacity of the country was 50.62% in 1963 and has thereafter declined to 25.19%. As on 31.3.1996 the installed capacity of hydro projects is 20976.09 MW out of the total installed capacity of 83287.96 MW. Some of the issue which have retarded the pace of progress of the hydro projects are resource crunch and cash flow problem, rehabilitation problems, land acquisition problem, law and order aspects, inter-state aspects and environmental considerations.

(c) and (d). Amongst the measures taken by the Government towards harnessing the hydro potential are creation of central/joint sector corporations, increase in outlay for development of hydro projects, increase in budgetary allocation for central/joint sector projects and arranging funds for hydel projects through external assistance. Besides the Government has modified the financial, administrative and legal procedures to attract private investment, and as a result, 22 proposals have been received for setting up of hydel power projects aggregating to 11070 MW.

Palm Oil Mill

1855. DR. KRUPASINDHU BHOI : Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state :

(a) whether the Council of Scientific and Industrial Research (CSIR) has developed a technology for Palm Oil Mill;

(b) if so, the details thereof; and

(c) the steps taken to make the scheme profitable and commercially viable?

THE MINISTER OF STATE OF THE MINISTRY OF PLANNING AND PROGRAMME IMPLEMENTATION AND MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI YOGINDER K. ALAGH) : (a) and (b). The indigenous technology for oil palm processing has been developed by Regional Research Laboratory, Thiruvananthapuram. The technology package consists of following unit operations :

- Stabilisation of fresh fruit bunches
- Stripping of fresh fruit bunches
- Removal of empty bunches
- Digestion of oil palm fruits
- Extraction of oil palm fruits
- Clarification of oil
- Purification and drying of oil
- Oil Storage
- Recovery of oil palm nuts
- Effluent treatment

A proto-type unit of 2.5 tonnes fresh fruit bunches per hour capacity was established and commissioned in 1992 at Pedavegi, Andhra Pradesh in the premises of M/s. A.P. Oilseed Growers Federation, Hyderabad. This palm oil mill is operating successfully and oil recovery of more than 90% of the oil present in the fresh fruit bunches have been achieved. Edible grade crude red palm oil with less than 4% free fatty acid (FFA) is produced by the mill (permissible limit for edible grade oils).

(c) The palm oil mill is economically viable with a pay back period of 4.5 years break even point of 39.65% and average net profit on sales 14.41%. The technology package has been released to the following project engineering companies :

- M/s. Ark Industrial Product Pvt. Ltd., New Delhi.
- M/s. Japro Engineering Pvt. Ltd., Bombay
- M/s. Wilson Engineering Enterprises, Coimbatore

The project engineering companies are making offers to set up palm oils mills on turn key basis, based upon CSIR technology, to various clients in the country.

Naptha Based Power Plants

1856. SHRI SANAT MEHTA : Will the PRIME MINISTER be pleased to state :

(a) the total number of power projects cleared by Central Electricity Authority based on Naptha and liquid fuel;

(b) the total requirement of liquid fuel for these power projects;

(c) whether there is any indigenous alternative of this imported fuel; and

(d) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF POWER AND MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (DR. S. VENUGOPALACHARI) : (a) A total of 9 Power projects cleared by CEA are based on naphtha and other liquid fuels.

(b) About 6 million metric tonnes per annum of naphtha would be required for the above 9 projects.

(c) and (d). The indigenous supply of liquid fuel is insufficient to meet the national demand from the various consumer sectors such as agriculture, transport, power, aviation etc.